

Remarks

Claims 1-2, 4-22, 32, 34-36 are currently pending in the application. Please add new claims 40-48.

Drawings

A corrected drawing that responds to the objection in paragraph 2 of the office action is submitted herewith. Fig. 1 has been amended to call out the bottom terminal 16 which is a non-top terminal that is in electrical communication with the conductive region 17 by the conductive epoxy or solder 19.

§112

Claims 13 and 18 were rejected under 35 USC 112 as being indefinite since the claims lacked antecedent basis for the terms, "silicon package" and "bottom terminal" respectively. Appropriate correction has been made to these claims to overcome this rejection.

§102(b)

Claims 1, 2, 5-22, 32 and 34-36 are rejected under 35 USC 102(b) as being anticipated by U.S. patent 5,828,126 to Thomas. The chip on board package with top and bottom terminals of Thomas as shown in Fig. 2b is composed of multiple layers (22, 24, 26 and 28) to form the package. In between various layers, a conductive material is provided such as 14A and 14B as well as 16A and 16B. Each layer is separate as clearly shown in Fig. 1C of Thomas. In the present application, each of the independent claims as amended now requires that the silicon package is formed from an integral piece of silicon. As stated, the patent of Thomas does not show a package formed from an integral silicon wafer having a recess and therefore independent claims 1, 15, 16, 21 and 32 that require this limitation distinguish over the Thomas patent. Further, the Thomas reference makes no recitation that the layers are made from silicon. Column 3 lines 47-59 discusses various plastics and

polymides, but this passage does not reference silicon as a material. Also, the claims require that the integral silicon package has a recess for holding the bare die electronic device. The patent of Thomas does not show such an integral silicon wafer having a recess.

Claims, 2, 5-14, 17-20, 22, and 34-36 each depend from an allowable independent claim and each claim adds at least one additional limitation and therefore these claims are allowable for at least the same reasons as provided above.

New claims 40-48 have been added and applicant asserts that no new matter has been added. Support for new claims 43 and 44 can be found at page 3 lines 24-26. Claims 43 and 44 are allowable for the same reason as provided above for independent claim 32. Claim 42 is also allowable for the same reasons as provided above, since it depends from independent claim 16.

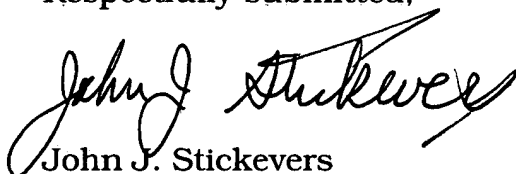
New claims 40, 41 and 45 also distinguish over the patent to Thomas. These claims require an electrical coupling between a contact of the terminal of the electronic device to the conductive region via non-wire bonding. It is clear from Fig. 2A of the Thomas patent that the electrical coupling between the terminals of electronic device 18 and the metalized fingers 14 and 16 are achieved through wire bonds 32. Thus, claims 40, 41 and 45 also distinguish over the Thomas patent. Claims 46-48 each claim depends from allowable independent claim 45 and add an additional limitation. For this reason claims 46-48 are allowable.

§103

Claim 4 has been rejected as unpatentable over Thomas in view of the patents to Yoshida et al. or Oji. et al. As stated above, the Thomas patent does not teach or suggest a package formed from an integral silicon wafer having a recess as required by claim 4. Neither Oji or Yoshida teach such a limitation. Since none of these references teach this required limitation of claim 4, the embodiment of claim 4 cannot be obvious in view of any combination of these references.

For the reasons set forth above, it is submitted that all pending claims are now in condition for allowance. Reconsideration of the amended claims and a notice of allowance are therefore requested. It is believed that a one month extension of time is required for this matter which is enclosed herewith. If any additional fees are required for the timely consideration of this application, please charge deposit account number 19-4972. The Examiner is requested to telephone the undersigned if any matters remain outstanding so that they may be resolved expeditiously.

Respectfully submitted,



John J. Stickevers
Registration No. 39,387
Attorney for Applicants

Bromberg & Sunstein LLP
125 Summer Street
Boston, MA 02110-1618
(617) 443-9292

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